REMARKS

Claims 1-18 and 20-124 presently appear in this case. The above amendments to the claims are being made in order to eliminate any multiply dependent claims, for the purpose of reducing the filing fee. Please enter this amendment prior to calculation of the filing fee in this case.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with Markings to Show Changes Made**."

Favorable consideration and allowance are earnestly solicited.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claim 19 has been cancelled.

Claims 17, 18, 25, 26, 73, 74, 80, 82, 84, 86, 118, 120, 121, 122 and 123 have been amended as follows:

17. (Amended). Polynucleotide according to claim 1, wherein the complementary strand of said polynucleotide hybridizes under stringent conditions with the polynucleotide [according to any of claims 13 to 16] defined by nucleotides 542 to 1930 of SEQ ID NO:1 and encodes a polypeptide that

a) has Mucor circinelloides protein kinase A regulatory subunit [acitivty] activity and is a regulator of morphology of dimorphic fungal cell; and/or

b) is recognized by an antibody, or a binding fragment thereof, which is capable of recognizing a cAMP binding domain of Mucor circinelloides protein kinase A, wherein said cAMP binding domain is comprised by the polypeptide having the amino acid sequence as shown in SEQ ID NO:2; and/or

c) is competing with a polypeptide comprising or essentially consisting of the amino acid sequence as shown in SEQ ID NO:2 for binding to at least one predetermined binding partner, including cAMP and/or the catalytic subunit for protein kinase A.

18 (Amended). Polynucleotide according to claim 1 and comprising a nucleotide sequence which [is degenerate to the first nucleotide sequence according to any of claims 16 and 17] encodes a polypeptide encoded by nucleotides 542 to 1930 of SEQ ID NO:1.

25 (Amended). Polynucleotide according to claim 1, wherein the complementary strand of said polynucleotide hybridizes under stringent conditions with the polynucleotide

[according any of claims 21 to 24] defined by nucleotides 534 to 2471 of SEQ ID NO:1 and encodes a polypeptide that

a) has Mucor circinelloides catalytic subunit of protein kinase A activity and is a regulator of morphology of a dimorphic fungal cell; and/or

b) is recognized by an antibody, or a binding fragment thereof, which is capable of recognizing a protein kinase A binding domain of Mucor circinelloides PKAC, wherein said domain is comprised by the polypeptide having the amino acid sequence as shown in SEQ ID NO:12; and/or

c) is competing with a polypeptide comprising or essentially consisting of the amino acid sequence as shown in SEQ ID NO:12 for binding to at least one predetermined binding partner, including PKAR.

26 (Amended). Polynucleotide according to claim 1 and comprising a nucleotide sequence which [is degenerate to] encodes a polypeptide encoded by the [first] nucleotide sequence [according to any of claims 24 and 25] defined by nucleotides 534 to 2471 of SEQ ID NO:11.

73 (Amended) Polynucleotide according [any of claims 71 to 72] claim 71, wherein the first morphological condition of the fungal cell characterized by a unicellular, essentially spherical morphology is further characterized by an essentially isodiametrical or spherical shape of the fungal cell.

74 (Amended). Polynucleotide according to [any of claims 71 to 72] claim 71, wherein the second morphological condition of the dimorphic fungal cell, wherein the fungal cell comprises a mycelium and is characterized by filamentous

growth, is further characterized by an essentially elongated, hyphal cell shape resulting from a polarized growth of a fungal cell characterized by the first morphological condition.

80 (Amended) A extrachromosomal, recombinant DNA molecule, preferably in the form of an expression vector, comprising the polynucleotide according to [any of claims 1 to 74] claim 1.

82 (Amended). A fungal host cell transfected or transformed with the polynucleotide according to [any of claims 1 to 74, or the vector according to any of claims 80 and 81] claim 1, or a vector comprising said polynucleotide.

84 (Amended). Fungal cell according to claim 82 [or dimorphic fungal cell according to claim 83], wherein said fungal cell [or said dimorphic cell] further comprises

i) at least one nucleotide sequence encoding a gene product, and operably linked thereto, and

ii) at least one further nucleotide sequence comprising a further expression signal capable of directing the expression in a [dimorphic] fungal cell of the at least one nucleotide sequence encoding the gene product, wherein said further expression signal is regulatable, during growth of the [dimorphic] fungal cell, by one or more of

a) the composition of the growth medium, including at least one of carbon source, nitrogen source including amino acids or precursors thereof, oxygen content, ionic strength, including NaCl content, pH, low molecular weight compounds, cAMP, and the presence or absence of a cell constituent, or a precursor thereof,

b) the temperature of the growth medium, including any change thereof, including an upshift eliciting the expression of one or more heat shock genes,

c) the growth phase of the [dimorphic] fungal cell, and

d) the growth rate of the [dimorphic] fungal cell.

86 (Amended). Dimorphic fungal cell according to claim 85 transfected or transformed with [the] a polynucleotide [according to any of claims 1 to 74, or the vector according to any of claims 80 and 81] comprising

i) a first nucleotide sequence according to at least one regulator of morphology capable of regulating the morphology of a dimorphic fungal cell, and operably linked thereto

ii) a second nucleotide sequence comprising an expression signal capable of directing the expression of the first nucleotide sequence in a dimorphic fungal cell,

wherein the first and second nucleotide sequences are not natively associated.

118 (Amended) Method for constructing a recombinant fungal cell according to claim 82, [or a recombinant dimorphic fungal cell according to claim 83,] said method comprising the step of transforming or transfecting a polynucleotide [according to any of claims 1 to 74, or the vector of any of claims 80 and 81,] into a fungal cell, or a dimorphic fungal cell which polynucleotide comprises

i) a first nucleotide sequence according to at least one regulator of morphology capable of regulating the morphology of a dimorphic fungal cell, and operably linked thereto

ii) a second nucleotide sequence comprising an expression signal capable of directing the expression of the first nucleotide sequence in a dimorphic fungal cell,

wherein the first and second nucleotide sequences are not natively associated.

120 (Amended). Method for regulating the morphology of a recombinant fungal cell according to claim 82, [or a recombinant dimorphic fungal cell according to claim 83,] said method comprising the steps of

i) cultivating said fungal cell [or said dimorphic fungal cell] under conditions allowing expression of said first nucleotide sequence encoding the at least one regulator of morphology, and

ii) regulating the morphology of said recombinant fungal cell [or said recombinant dimorphic fungal cell].

121 (Amended). Method for obtaining a predetermined dimorphic shift of a dimorphic fungal cell according to [any of claims 83 or 86] claim 83, said method comprising the steps of

i) cultivating said dimorphic fungal cell under conditions allowing expression of said first nucleotide sequence encoding the at least one regulator of morphology, and

ii) obtaining a predetermined dimorphic shift of said dimorphic fungal cell, wherein said dimorphic shift results from regulating the expression in said dimorphic cell of said regulator of morphology.

122 (Amended) Method for increasing the filamentation of a dimorphic fungal cell according to [any of

claims 83 or 86] claim 83, said method comprising the steps of

i) cultivating said dimorphic fungal cell under conditions allowing expression of said first nucleotide sequence encoding the at least one regulator of morphology, and

ii) increading the filamentation of said dimorphic fungal cell, wherein said increased filamentation results from regulating the expression in said dimorphic cell of said regulator of morphology.

123 (Amended). Method for increasing the secretory capacity of a dimorphic fungal cell according to [any of claims 83 or 86] claim 83, said method comprising the steps of

i) cultivating said dimorphic fungal cell under conditions allowing expression of said first nucleotide sequence encoding the at least one regulator of morphology, and

ii) increasing the secretory capacity of said dimorphic fungal cell, wherein said increased secretory capacity results from regulating the expression in said dimorphic cell of said regulator of morphology.